



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,605	07/17/2003	Qi Xiang	64965-168	9283
7590	11/16/2005		EXAMINER	
McDermott, Will & Emery 600 13th Street, N.W. Washington, DC 20005-3096			CRANE, SARA W	
			ART UNIT	PAPER NUMBER
			2811	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/620,605	XIANG, QI
	Examiner	Art Unit
	Sara W. Crane	2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 September 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 10-27 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 10-27 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 10-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As noted in the previous Office action, It is not clear whether the claim language of "interposed isolation region" means an isolation region that contacts the first and second regions, or an isolation region that merely lies somewhere between the two regions. For example, in claim 10, the phrase "spaced apart from each other by interposed isolation regions" is not clear. It seems to the examiner that there are two ways to interpret the word "interposed." The dictionary interpretation would be that "interposed" derives from the verb "interpose," which describes a physical act or action of insertion or of placing one part between two other parts. So that, grammatically, "interposed" would refer to the structural arrangement resulting from the action. With respect to claim 10, reference to the dictionary definition would therefore lead one to conclude that the "one or more first regions" and the "one or more second regions" were formed first, and then the "isolation regions" were inserted or introduced between them. So the "isolation regions" are located somewhere between the regions that are "spaced apart from each other by interposed isolation regions." This analysis does not really specify whether or not the isolation region contacts the first and second regions.

But Applicant's specification seems to use the word "interposed" in a sense not entirely consistent with the dictionary definition. Under "Summary of the Invention," second paragraph, a sentence reads, "The first FET comprises a gate electrode formed

over the SiGe layer, and a gate oxide layer interposed between the gate electrode and the SiGe layer," Here the word "interposed" refers merely to a location, and not at all to the result of any action. (One would not form the gate electrode and the SiGe layer first, and then interpose, or insert, a gate electrode between them.) So, under this "looser" interpretation of the word "interposed," no specific actions or process steps would be implied. This type of analysis is proper to aid in claim interpretation, because Applicant can be his or her own lexicographer. But the sentence quoted above reads, in its entirety, "The first FET comprises a gate electrode formed over the SiGe layer, and a gate oxide layer interposed between the gate electrode and the SiGe layer, wherein the gate oxide layer is formed immediately adjacent to and in contact with the SiGe layer." So the term "interposed," according to the usage in Applicant's specification, means not only "located between," but "formed immediately adjacent to and in contact with."

So would one interpret the word "interposed" as meaning "formed immediately adjacent to and in contact with," as in the specification? Or would one interpret the word "interposed" as meaning "the result of an insertion step," as in the literal or dictionary usage? Applicant suggests in the Remarks of 2 September 2005 that one should adopt the broadest reasonable interpretation consistent with the specification. Well, of course. But what interpretation would that be? As noted above, the problem seems to arise because Applicant's specification uses the term "interposed" in a situation where an action of "interposing" has never taken place, and the term refers only to a location, rather than referring to the literal meaning. So it would seem that the

broadest reasonable interpretation that is also consistent with the specification would be "formed immediately adjacent to and in contact with," as quoted from the specification above. Such an interpretation could, of course, be adopted in an examiner's statement of reasons for allowance, but a clear statement by Applicant of the scope of claim coverage sought really should be provided in the record.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

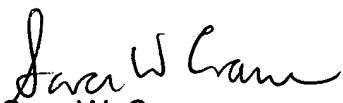
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Crane, whose telephone number is (571) 272-1652.

The supervisor for Art Unit 2811, Eddie Lee can be reached on (571) 272-1732. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2811

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sara W. Crane
Primary Examiner
Art Unit 2811

Second College Edition

The **American Heritage
Dictionary**

BEST AVAILABLE COPY

internal-combustion engine | interrupt

internal *limits* or surface of something; inner. 2. Residing in or dependent on the essential nature of something; intrinsic. 3. Located, acting, or effective within the body. 4. Of or relating to the domestic affairs of a nation. [NLat. *internālis* *Lat. inter-* *internus* < *inter*, within.] —internal'ly *n.* —internal'ity *adj.*

internal-combustion engine (in-tür'nal-käm-büs'chän) *n.* An engine, as an automotive gasoline piston engine or a steam engine, in which fuel is burned within the engine proper rather than in an external furnace, as in a steam engine. *internal ear n.* The portion of the ear that includes the semicircular canals, the vestibule, and the cochlea.

internalize (in-tür'na-liz') *tr.v.* -ized, -izing, -izes. 1. To make internal. 2. To take in (cultural values, for example) and make an integral part of one's attitudes or beliefs. —internalization *n.*

internal medicine *n.* The medical study and treatment of surgical and constitutional diseases in adults.

internal rhyme *n.* Rhyme between a word within a line and another word at the end of that line or between two words within two different lines.

internal secretion *n.* A secretion of an endocrine gland discharged directly into the blood.

international (in-tür'nash'ə-nəl) *adj.* 1. Of, relating to, or involving two or more nations. 2. Extending across the boundaries of two or more nations. —*n.* **international** *n.* Any of several socialist organizations of international scope formed during the late 19th and early 20th centuries. —international'ly *adv.* —internationalism *n.* The date line.

internationalism (in-tür'nash'ə-nəl-iz'm) *n.* 1. The state or quality of being international in character, principles, concern, or attitude. 2. A policy or practice of cooperation among nations, esp. in politics and economy. —internationalist *n.*

internationalize (in-tür'nash'ə-nə-liz') *tr.v.* -ized, -izing, -izes. 1. To make international. 2. To put under international control. —internationalization *n.*

international law *n.* A set of rules generally regarded and accepted as binding in relations between states and nations.

international Morse code *n.* The continental code.

international Phonetic Alphabet *n.* A phonetic alphabet sponsored by the International Phonetic Association to provide a unique symbol for each speech sound.

international pitch *n.* A standard of tuning of 440 vibrations per second for A above middle C.

international System *n.* A complete, coherent system of units used for scientific work, based on the metric system with the addition of units of time, electric current, temperature, and luminous intensity.

international unit *n.* An internationally accepted quantity of a biological, as a vitamin or antibiotic, that produces a specific biological effect.

intern (in-türn', in-türn') *n., v., & adj.* Variant of *intern*.

internecine (in-tür'né-s'ēn', -in', -n'ēs'in) *adj.* 1. Mutually destructive; ruinous or fatal to both sides. 2. Characterized by bloodshed or carnage. 3. Of or relating to struggle within a group. [Lat. *internecinus* < *internecire*, massacre < *internus*, to slaughter: *inter-* (intensive) + *neare*, to kill.]

internecine (in-tür'nē-nē) *n.* One who interned.

internervous (in-tür'nōr'ōs', -nyōōr'ōs-) *n.* An intermunicipal neuron. —**internervous** (in-tür'nōr'ō-nal, -nyōōr'ō-nal, -nōōr'ō-, -nyōō-) *adj.*

internist (in-tür'nist) *n.* A physician who specializes in internal medicine. [INTERN(AL MEDICINE) + -IST.]

internment (in-tür'ment) *n.* The act of interning or the state of being interned.

internode (in-tür'nōd') *n.* A section or part between two nodes, as of a nerve or stem. —**internodal** (in-tür'nōd'l) *adj.*

internuclear (in-tür'nōk'le-ər, -nyōōk'le-ər) *adj.* Located or occurring between nuclei.

internuncial (in-tür'nūn'shəl, -sē-əl) *adj.* Linking two neurons in a neuronal pathway. [INTERNU(M) + -CIAL] —internuncially *adv.*

internuncio (in-tür'nūn'sē-ō', -nōōn'-ō') *n., pl. -os.* A Vatican diplomatic envoy or representative ranking just beneath a nuncio. 2. A messenger or agent; go-between. [Ital. *internuncio* < Lat. *internuntius*, mediator: *inter-*, between + *nuntius*, messenger.]

interceptor (in-tür'ō-sēp'tər) *n.* A specialized sensory nerve receptor responding to stimuli originating in internal organs. [INTER(ATOR) + (RE)CEPTOR.] —**interceptor** *adj.*

interoffice (in-tür'ōf'is, -f'is) *adj.* Taking place between offices, esp. of an organization.

interpolate (in-tür'pō-lāt', in-tür'pō-lāt') *tr.v.* -lated, -lating, -lates. To question (a government official) formally about government policy or action or about personal behavior. [Lat. *interpellare*, *interpellar*, to interrupt, disturb.] —**interpolator** *n.* —**interpolator** *n.*

interpenetrate (in-tür'pēn'ē-trāt') *v.* -trated, -trating, -rates. —*tr.* To penetrate between or throughout. —*intr.* To penetrate mutually. —**interpenetration** *n.* —**interpenetrative** *adj.*

interpersonal (in-tür'pōr'sə-nal) *adj.* Of, relating to, involving, or being relations between persons. —**interpersonal** *adj.*

internal-combustion engine (in-tür'nal-käm-büs'chän) *n.* An engine, as an automotive gasoline piston engine or a steam engine, in which fuel is burned within the engine proper rather than in an external furnace, as in a steam engine. *internal ear n.* The portion of the ear that includes the semicircular canals, the vestibule, and the cochlea.

internalize (in-tür'na-liz') *tr.v.* -ized, -izing, -izes. 1. To make internal. 2. To take in (cultural values, for example) and make an integral part of one's attitudes or beliefs. —internalization *n.*

internal medicine *n.* The medical study and treatment of surgical and constitutional diseases in adults.

internal rhyme *n.* Rhyme between a word within a line and another word at the end of that line or between two words within two different lines.

internal secretion *n.* A secretion of an endocrine gland discharged directly into the blood.

international (in-tür'nash'ə-nəl) *adj.* 1. Of, relating to, or involving two or more nations. 2. Extending across the boundaries of two or more nations. —*n.* **international** *n.* Any of several socialist organizations of international scope formed during the late 19th and early 20th centuries. —international'ly *adv.* —internationalism *n.* The date line.

internationalism (in-tür'nash'ə-nəl-iz'm) *n.* 1. The state or quality of being international in character, principles, concern, or attitude. 2. A policy or practice of cooperation among nations, esp. in politics and economy. —internationalist *n.*

internationalize (in-tür'nash'ə-nə-liz') *tr.v.* -ized, -izing, -izes. 1. To make international. 2. To put under international control. —internationalization *n.*

international law *n.* A set of rules generally regarded and accepted as binding in relations between states and nations.

international Morse code *n.* The continental code.

international Phonetic Alphabet *n.* A phonetic alphabet sponsored by the International Phonetic Association to provide a unique symbol for each speech sound.

international pitch *n.* A standard of tuning of 440 vibrations per second for A above middle C.

international System *n.* A complete, coherent system of units used for scientific work, based on the metric system with the addition of units of time, electric current, temperature, and luminous intensity.

international unit *n.* An internationally accepted quantity of a biological, as a vitamin or antibiotic, that produces a specific biological effect.

internationalization (in-tür'nash'ə-nə-lyz'āshən) *n.* The process of becoming international.

internationalize (in-tür'nash'ə-nə-liz') *tr.v.* -ized, -izing, -izes. 1. To make international. 2. To put under international control. —internationalization *n.*

internationalism (in-tür'nash'ə-nəl-iz'm) *n.* 1. The state or quality of being international in character, principles, concern, or attitude. 2. A policy or practice of cooperation among nations, esp. in politics and economy. —internationalist *n.*

internationalization (in-tür'nash'ə-nə-lyz'āshən) *n.* The process of becoming international.

internationalization (in-tür'nash'ə-nə-lyz'āshən) *n.* The process of becoming international.